

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

***In re* Application of:**

Tao Chen.

Serial No.: 09/933,912

Filed: August 20, 2001

For: METHOD AND SYSTEM FOR
UTILIZATION OF AN OUTER DECODER
IN A BROADCAST SERVICES
COMMUNICATION SYSTEM

Examiner: Nittaya Juntima

Group Art Unit: 2616

Confirmation No. 7750

Attorney Docket No.: 010501

REPLY BRIEF

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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Attention: Board of Patent Appeals and Interferences

Sirs:

This Reply Brief is submitted pursuant to 37 C.F.R. § 41.41 in response to the Examiner's Answer mailed September 7, 2007. This Reply Brief is submitted within two months of the mailing date of the Examiner's Answer pursuant to 37 C.F.R. § 41.41(a)(1).

APPELLANT'S REPLY TO EXAMINER'S RESPONSE TO ARGUMENT

As set forth in detail in Appellant's Appeal Brief, Appellant maintains that the Examiner has failed to establish a *prima facie* case of obviousness because the cited references do not teach or suggest all of the claim limitations of Appellant's invention as claimed nor has the Examiner provided a proper motivation to modify or combine the cited references to produce the claimed invention. The motivation to modify or combine as proposed by the Examiner is improper and, therefore, does not establish a *prima facie* case of obviousness. Furthermore, the cited reference teaches away from Appellant's invention as claimed.

Appellant respectfully reminds the Examiner that to establish a *prima facie* case of obviousness, the prior art reference (or references when combined) **must teach or suggest all the claim limitations**. *In re Royka*, 490 F.2d 981, 985 (CCPA 1974); *see also* MPEP § 2143.03. Additionally, there must be "a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements" in the manner claimed. *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1742, 167 L.Ed.2d 705, 75 USLW 4289, 82 U.S.P.Q.2d 1385 (2007). Finally, to establish a *prima facie* case of obviousness there must be a reasonable expectation of success. *In re Merck & Co., Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986). Furthermore, the reason that would have prompted the combination and the reasonable expectation of success must be found in the prior art, common knowledge, or the nature of the problem itself, and not based on the Appellant's disclosure. *DyStar Textilfarben GmbH & Co. Deutschland KG v. C. H. Patrick Co.*, 464 F.3d 1356, 1367 (Fed. Cir. 2006); MPEP § 2144. Underlying the obvious determination is the fact that statutorily prohibited hindsight cannot be used. *KSR*, 127 S.Ct. at 1742; *DyStar*, 464 F.3d at 1367.

Additionally, a *prima facie* case of obviousness may be rebutted by showing that the art, in any material respect, **teaches away from the claimed invention**. *In re Geisler*, 116 F.3d 1465, 1471, 43 USPQ2d 1362, 1366 (Fed. Cir. 1997). Furthermore, it “is improper to combine references where the references teach away from their combination.” M.P.E.P. §2145(X)(D)(2) (citing *In re Grasselli*, 713 F.2d 731, 743, 218 U.S.P.Q. 769, 779 (Fed. Cir. 1983)). Furthermore, when the “proposed **modification would render the prior art invention being modified unsatisfactory for its intended purpose**, then there is no suggestion or motivation to make the proposed modification.” M.P.E.P. §2143.01 (citing *In re Gordon*, 733 F.2d 900, 221 U.S.P.Q. 1125 (Fed. Cir. 1984)).

The teachings of the cited references are as summarized on Appellant’s Appeal Brief.

Rejection of Claims 1-2, 4-7, 9, 33-34, 36-39, and 41 under 35 U.S.C. § 103

Claims 1-2, 4-7, 9, 33-34, 36-39, and 41 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,012,159 to Fischer *et al.* (“Fischer”). Appellant respectfully traverses this rejection, as hereinafter set forth.

Appellant respectfully submits that a *prima facie* case of obviousness has not been established regarding claims 1-2, 4-7, 9, 33-34, 36-39, and 41 because (1) the prior art cited does not teach or suggest **all the claim limitations**, (2) there is **no proper reason** that would have prompted a person of ordinary skill in the art **to modify** the cited reference, (3) the reference **teaches away** from the claimed invention and (4) the alleged **modifications render the prior art unsatisfactory** for its intended purpose.

(1) The Examiner's Answer concedes:

Fischer does not explicitly teach terminating reception of the frames when said determined number of frames was received correctly. (Examiner's Answer, p. 4).

Therefore, since Fischer not only does not teach or suggest Appellant's claim element of **"terminating reception of the frames"**, Fischer cannot render obvious under 35 U.S.C. §103 Appellant's invention as presently claimed. Accordingly, Appellant respectfully requests the rejections be withdrawn.

(2) The Examiner's Answer alleges:

... it would have been obvious to one skilled in the art at the time the invention was made to modify the teaching of Fischer to include terminating reception of the frames when said determined number of frames was received correctly as recited in the claim. The **suggestion/motivation to do so would have been to disregard other packets** since [a] *sufficient number of packets is already received* for the reconstruction of the original file. (Examiner's Answer, p. 4; emphasis added).

Appellant respectfully disagrees that a reasonable person of ordinary skill in the art looking to "terminat[e] reception of [] frames" would be motivated to modify a reference that teaches of **receiving all of the packets** prior to performing any analysis of the frames. Specifically, Fischer teaches:

Subscriber computer C correctly **receives** encoded **packets 1, 3, 5, 6, 7, 9 and 10**, but misses encoded packets **2, 4 and 8 [i.e., all of the packets]**. (Fischer, col. 10, lines 14-16; emphasis added).

... the **subscriber** computers **receives a sequence of packets Y'**; $i = 1, 2, \dots, n$, **[i.e., all of the packets]** which are the packets of codefile Y corrupted by the noise channel. In step S6, EDAC decoding is performed ... to detect and correct, if possible, bit-level errors within the Y' packets. (Fischer, col. 7, lines 31-36; emphasis added).

Clearly, Fischer teaches of **receiving** only **all frames** (i.e., packets) and then subjecting **all frames** to the various Fischer processes (e.g., decoding, error detection and correction, etc.). In Fischer, receipt of all of the frames is the basis from which all other packet processing occurs.

Therefore, a person of ordinary skill in the art at the time the invention was made would not be motivated to modify teachings (*e.g.*, terminating reception of any of the frames) of a reference that so fundamentally relies upon processing all of the frames as a basis from which packets are corrected for the purpose of further decoding. Accordingly, since there is no suggestion or motivation that would lead a reasonable person to modify Fischer as alleged, Appellant respectfully requests the rejections be withdrawn.

(3) Appellant respectfully reminds the Examiner that a “*prima facie* case of obviousness may be rebutted by a showing that the art, in any material respect, **teaches away from the claimed invention.**” *In re Geisler*, 116 F.3d 1465, 1471, 43 USPQ2d 1362, 1366 (Fed. Cir. 1997). Furthermore, it “is improper to combine references where the references teach away from their combination.” M.P.E.P. §2145(X)(D)(2) (citing *In re Grasselli*, 713 F.2d 731, 743, 218 U.S.P.Q. 769, 779 (Fed. Cir. 1983)). Accordingly, Appellant respectfully asserts that Fischer clearly *teach away* from a “**terminating reception of the frames**” as claimed by Appellant. Appellant herein sustains the above-quotations of the specific teachings of Fischer, namely, that the subscriber *receives all* of the *packets/frames*.

Furthermore, Fischer teaches of processing the packets by *receiving all of the packets*, determining which of *all of the packets* are decodable and which of *all of the packets* are undecodable, and further decoding the original message from the decodable packets if they are of sufficient quantity. Specifically, Fischer teaches that *all of the packets are received* and used to populate a generator matrix G and that *all of the received packets*, whether correctly received or whether detected as being undecodable (*i.e.*, “lost”), are populated into the matrix G. (Fischer, col. 10, lines 19-23). Fischer then discards the undecodable packets and forms a matrix A from

the populated matrix G which is used for the final decoding process. (Fischer, col. 7, lines 52-65).

Therefore, since Fischer teaches of receiving all of the packets and since the packet analysis and forthcoming final decoding of the received packets is based upon an analysis of all of the packets, Fischer teaches away from “terminating reception of frames” as claimed by Appellant. Accordingly, Appellant respectfully requests the rejections be withdrawn.

(4) Appellant respectfully reminds the Examiner that when the “proposed **modification would render the prior art invention being modified unsatisfactory for its intended purpose**, then there is no suggestion or motivation to make the proposed modification.”

M.P.E.P. §2143.01 (citing *In re Gordon*, 733 F.2d 900, 221 U.S.P.Q. 1125 (Fed. Cir. 1984)). As stated above, Fischer teaches that the final decoding process (*i.e.*, inverting matrix A) requires the formation of the matrix A which is formed from paring down the populated matrix G which itself was populated as a result of receiving all of the packets Y'. (Fischer, col. 10, lines 19-23).

Therefore, the Examiner’s proposed modifications to Fischer, namely, “*to disregard other packets* since [a] sufficient number of packets is already received for the reconstruction of the original file” would render Fischer “unsatisfactory for its intended purpose” by preventing population of all of the packets into the code generator matrix G from which matrix A is derived for use in the final decoding process. Accordingly, Appellant respectfully requests the rejections be withdrawn.

Claims 2 and 34 are allowable as depending directly from an allowable base claim.

Claims 4, 7, 36, and 39 are allowable as depending directly or indirectly from an allowable base claim.

Claims 5 and 37 are allowable as depending directly or indirectly from an allowable base claim.

Claims 6 and 38 are allowable as depending directly or indirectly from an allowable base claim.

Claims 9 and 41 are allowable as depending directly or indirectly from an allowable base claim.

Claim 33 is allowable for the same reasons given above for claim 1.

Rejection of Claims 3, 8, 35, and 40 under 35 U.S.C. § 103

Claims 3, 8, 35, and 40 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Fischer in view of U.S. Patent No. 5,537,410 to Li (“Li”). Appellant respectfully traverses this rejection, as hereinafter set forth.

Appellant respectfully sustains the previously proffered arguments. Furthermore, Appellant respectfully submits that claims 3, 8, 35, and 40 are allowable as depending directly or indirectly from an allowable base claim as well as for the reasons given above.

CONCLUSION

Pursuant to 37 C.F.R. § 41.43(a)(1), Appellant respectfully requests acknowledgement of receipt and entry of this Reply Brief.

In view of the Examiner's withdrawal of the objections to claims 10, 20 and 52 and further in view of the Examiner's withdrawal of rejections to claims 14 and 15, Appellant's claims 10-24 and 42-56 are allowed. Appellant respectfully requests the reversal of the rejections of currently pending claims 1-9 and 33-41 for the reasons set forth above.

Respectfully submitted,

Dated: November 6, 2007

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